

Claims

1. A method for treating an individual suffering from or having a tendency to develop a food allergy comprising administering to said individual a therapeutically effective amount of a modified food allergen, wherein the food allergen is modified by reduction and alkylation.
2. A method according to claim 1, wherein the food allergen is an allergenic food protein.
3. A method according to claim 1 or 2, wherein the food allergen is a seed storage protein.
4. A method according to claim 3, wherein the storage protein is a 2S albumin, lipid transfer protein (LTP), or conglutin.
5. A method according to claim 4, wherein the storage protein is a tree nut or seed 2S albumin.
6. A method according to claim 5, wherein the storage protein is brazil nut 2S albumin.
7. A method according to any of the preceding claims, wherein the food allergen is modified by reduction using a reducing agent chosen from the group of 2-mercaptoethanol, dithiothreitol, dithioerythritol, tributylphosphine, and a combination thereof.
8. A method according to any of the preceding claims, wherein the food allergen is modified by alkylation using an alkylating agent chosen from the group of N-ethylmalimide, cystamine, iodoacetamide, iodoacetic acid and combinations thereof.
9. A method according to any of the preceding claims, wherein the modified food allergen is administered in the form of a dosage form chosen from the group of a capsule, tablet, lozenge, dragee, pill, droplets, suppository, aerosol, powder, spray, vaccine, ointment, paste, cream, inhalant, or patch.

10. A method according to claim 9, wherein the dosage form further comprises a pharmaceutically acceptable carrier and/or an adjuvant.
11. A method according to any of the preceding claims, wherein the modified food allergen is administered orally, intraperitoneally,  
5 subcutaneously, intravenously, intramuscularly, pulmonarily, or via mucosa.
12. A method according to any of the preceding claims, wherein the modified food allergen induces production of Thelper-1 mediated subclasses of IgG antibodies.
13. A method according to any of the preceding claims, wherein the  
10 production of IgE antibodies is down-regulated.
14. A food allergen modified by reduction and alkylation for use in a method according to any of the preceding claims.
15. A pharmaceutical composition comprising an food allergen modified by reduction and alkylation for use in a method according to any of the claims  
15 1-13.
16. Use of a food allergen modified by reduction and alkylation for the manufacture of a medicament for immunotherapy treatment of a food allergy brought about by the native form of said allergenic protein.